

## Amendments to the Claims

1. (currently amended): A method for blind transport format detection, the method comprising the steps of:

receiving an over-the-air signal comprising a plurality of transport channels multiplexed onto the over-the-air signal, wherein each of the plurality of transport channels comprises one of a plurality of possible transport formats;

determining a plurality of transport format combinations;

for each of the plurality of transport format combinations,

determining a plurality of Cyclic Redundancy Check (CRC) metrics for each of the transport channels and a first transport format channel component of the transport format combination;

combining the CRC metric of each channel component to form a transport format combination metric; and

determining which one of the plurality of transport combinations was utilized a transport format combination based on the transport format combination metrics.

2. (currently amended): The method of claim 1 wherein ~~the step of receiving the over-the-air signal comprising the plurality of transport channels multiplexed onto the over-the-air signal, wherein each of the plurality of transport channels comprises the plurality of transport formats comprises the step of receiving the over-the-air signal comprising the plurality of transport channels multiplexed onto the over-the-air signal, wherein each of the plurality of transport channels comprises the plurality of transport formats, wherein the plurality of possible transport formats has a particular bit rate.~~

3. (currently amended): The method of claim 4 5 wherein ~~the step of determining the transport format combination metric based on the plurality of CRC metrics~~ further comprising determining the largest transport format combination metric according to

comprises the step of determining  $\hat{k} = \arg \max_{k \in \{1, 2, \dots, K\}} \left\{ \sum_{i=1}^I p_i CRC_i^k \right\}$ , wherein

$p_i \in \{24, 16, 12, 8, 0\}$  is a number of CRC bits for an  $i$ th transport channel and  $CRC_i^k$  equals to 1 if a TTI frame under hypothesis  $TF_i^k$  for an  $i$ th transport channel passes a CRC check; and  $CRC_i^k$  equals to 0 if the TTI frame under hypothesis  $TF_i^k$  fails the CRC check or a CRC result is not available; and wherein K is a total number of format combinations possible.

4. (currently amended): The method of claim 4 ~~5~~ wherein the step of determining the transport format combination metric based on the plurality of CRC metrics further comprising determining the largest transport format combination metric according to ~~comprises the step of~~

$$\text{etermining } \hat{k} = \arg \max_{k \in \{1, 2, \dots, K\}} \left\{ \sum_{i=1}^I \left( \left( p_i + \ln \frac{1 - e_i^k}{e_i^k} \right) CRC_i^k + \ln e_i^k \right) \right\}, \text{ wherein}$$

$p_i \in \{24, 16, 12, 8, 0\}$  is a number of CRC bits for an  $i$ th transport channel and  $CRC_i^k$  equals to 1 if a TTI frame under hypothesis  $TF_i^k$  for an  $i$ th transport channel passes a CRC check; and  $CRC_i^k$  equals to 0 if the TTI frame under hypothesis  $TF_i^k$  fails the CRC check or a CRC result is not available; and wherein K is a total number of format combinations possible.

5. (currently amended): The method of claim 1 wherein the step of determining which one of the plurality of transport combinations was utilized comprises determining which one of the plurality of transport combinations was utilized based on a largest transport format combination metric ~~the transport format based on the transport format combination metric comprises the step of determining the transport format, wherein the transport format utilized corresponds to the transport format having a largest transport format combination metric.~~

6. – 9. (cancelled)

10. (currently amended): An apparatus comprising:

a de-multiplexer having a data stream as an input, wherein the data stream comprises a plurality of transport channels, each having one of a plurality of possible transport channel formats, the de-multiplexer outputting a plurality of channels based on a particular transport format combination;

a plurality of Cyclic Redundancy Checking (CRC) circuitry, each having one of the plurality of channels as an input and outputting a CRC metric for the channel; and

a logic unit having ~~a plurality of~~ the CRC metrics ~~values~~ from the plurality of channels as an input and outputting a transport format combination metric based on the ~~plurality of CRC metrics~~ values.

11. (original): The apparatus of claim 10 further comprising storage outputting data based on a transport format combination corresponding to a largest transport format combination metric.

12. (currently amended): The apparatus of claim 10 wherein the transport format combination metric is based on  $\hat{k} = \arg \max_{k \in \{1, 2, \dots, K\}} \left\{ \sum_{i=1}^I p_i CRC_i^k \right\}$ , wherein  $p_i \in \{24, 16, 12, 8, 0\}$  is a number of CRC bits for an  $i$ th transport channel and  $CRC_i^k$  equals to 1 if a TTI frame under hypothesis  $TF_i^k$  for an  $i$ th transport channel passes a CRC check; and  $CRC_i^k$  equals to 0 if the TTI frame under hypothesis  $TF_i^k$  fails the CRC check or a CRC result is not available; and wherein K is a total number of format combinations possible.

13. (currently amended): The apparatus of claim 10 wherein the transport format combination metric is based on  $\hat{k} = \arg \max_{k \in \{1, 2, \dots, K\}} \left\{ \sum_{i=1}^I \left( \left( p_i + \ln \frac{1 - e_i^k}{e_i^k} \right) CRC_i^k + \ln e_i^k \right) \right\}$ , wherein  $p_i \in \{24, 16, 12, 8, 0\}$  is a number of CRC bits for an  $i$ th transport channel and  $CRC_i^k$  equals to 1 if a TTI frame under hypothesis  $TF_i^k$  for an  $i$ th transport channel passes a CRC check; and  $CRC_i^k$  equals to 0 if the TTI frame under hypothesis  $TF_i^k$  fails the CRC check or a CRC result is not available; and wherein K is a total number of format combinations possible.